the matrix notation comprising at least an index for each dimension of the array;

taking a sample from each of the multiplicity of biological fluid donations;

B1 Cont'd

mapping each sample to a respective particular one of each element of the matrix, each individual sample identified by its corresponding element's respective matrix notation;

taking aliquots from each sample, the number of aliquots taken from each sample defined by the number of dimensions characterizing the matrix;

forming subpools from the aliquots of each sample, each subpool containing an aliquot from all samples identified by a matrix notation in which one dimensional index is fixed, each respective subpool identified by said fixed dimensional index;

providing the subpools to a [PCR] high-sensitivity testing facility, wherein all of the subpools are tested for viral indication in a single [PCR analysis] high-sensitivity test cycle;

determining the respective fixed dimensional indices of subpools which return a positive viral indication; and

combining said fixed dimensional indices into a matrix notation, thereby unambiguously identifying a unique matrix element defined by the matrix notation, thus unambiguously identifying a uniquely viral positive sample.

B2

~~4~~ 12. (Amended) The method according to claim ~~11~~ 3, wherein the subpool formation step further comprises:

forming subpools of aliquots from samples identified by identical r indices but different c and s indices;

forming subpools of aliquots from samples identified by identical c indices but different r and s indices;

forming subpools of aliquots from samples identified by identical s indices but different r and c indices; and

evaluating each of the r, c, and s subpools for a viral positive indication returned by [PCR] high-sensitivity testing.

45

10 18. (Amended) A method for uniquely identifying viral positive biological fluid donations in the fewest number of [PCR analysis] high-sensitivity test cycles, the method comprising:

providing a multiplicity of biological fluid donations;

defining an n-dimensional matrix, where n is an integer, the matrix further comprising a multiplicity of [internal] elements, each element defined by an intersection of the n-dimensions of the matrix, where each individual element identified by a respective matrix notation $X_{i...N}$, wherein the subscript of the matrix notation defines the dimensional indices of the array;

taking N aliquots from each sample of each of the multiplicity of biological fluid donations, the number of aliquots taken from each sample defined by the number of dimensional indices comprising the array;

forming subpools from the aliquots of each sample, each subpool comprising an aliquot from all of the samples identified by a matrix notation in which one dimensional index is fixed;

providing the subpools to a [PCR] high-sensitivity testing facility, wherein all of the subpools are tested for viral indication in a first [PCR analysis] high-sensitivity test cycle; and

evaluating the dimensional indicia of each subpool which returned a viral positive indication in the first [PCR analysis] high-sensitivity test cycle, in accordance with a reduction by the method of minors, the evaluation identifying a unique element defined by the dimensional indicia of each positive subpool if only a single subpool representing each dimensional index returns a positive viral indication,, thus unambiguously identifying a viral positive sample.

B3

14 22. (Amended) The method according to claim 21, 13 further comprising the step of taking an additional aliquot from each sample identified to each of the z^n viral positive candidate elements:

B4

46

B4 Conclude

providing the aliquots to a [PCR] high-sensitivity testing facility, wherein all of the aliquots are tested for viral indication in a second [PCR analysis] high-sensitivity test cycle; and unambiguously identifying all viral positive samples.

B5

-- ~~20~~ 28. The method according to claim ~~8~~ 1 wherein the high-sensitivity test is a PCR test. --

-- ~~21~~ 29. the method according to claim ~~11~~ 3 wherein the high-sensitivity test is a PCR test. --

-- ~~22~~ 30. The method according to claim ~~17~~ 9 wherein the high-sensitivity test is a PCR test. --

-- ~~23~~ 31. The method according to claim ~~18~~ 10 wherein the high-sensitivity test is a PCR test. --

-- ~~24~~ 32. The method according to claim ~~21~~ 19 wherein the high-sensitivity test is a PCR test. --

---

REMARKS

Claims 9-32 are in the application, with claims 9, 12, 18 and 22 having been amended and claims 28-32 added. Of the claims under consideration, claims 9 and 18 are the independent claims. Reconsideration and further examination are respectfully solicited.

Claims 9-27 were rejected under the judicially created Doctrine of Obviousness-type double-patenting over claims 1-10 of U.S. Patent No. 5,780,222.

Since the present application is a division of U.S. Patent Application Serial No. 08/778,610, now U.S. Patent No. 5,780,222 which is commonly owned by the assignee of the present invention, Applicants submit herewith a terminal disclaimer in compliance with 37 CFR § 1.321(c).

47